

Development of Forestry in Sweden—Any lessons for Africa?

Bjorn Lundgren

Royal Swedish Academy of Agriculture and Forestry

Abstract

During the SFM I project, studies were made on the relevance to Africa of Sweden's experience in 100–150 years to become a successful forestry country. Six major issues have influenced the development of forests, forestry and forest industries in Sweden. The first relates to the societal, economic and political macro-trends of the last 150 years—democratisation, industrialisation, urbanisation, etc. Obviously, developments in forestry have been influenced, and to a significant degree, made possible by these factors. Five other key issues help explain the current forest situation: that wood early on acquired a commercial value and that private land owners, the Government and industry exploited the opportunities to add extra value by industrial processing; that ownership of forests was largely in private hands (farmers and industry); that forest policies and legislation were put in place to support the developments in forestry; the role of NGOs; and the roles of Government.

Although ecological and economic conditions are obviously different, it was concluded that many Swedish lessons related to the processes and mechanisms of developing and administering forest policies and legislation, strengthening institutional capacity for supporting mechanisms to SFM, e.g. within areas of research, education/training, resource inventories and statistics, extension services, certification and market intelligence, etc., and in organising and empowering stake-holders in the use, management and conservation of forest and tree resources, could be of relevance, in adapted forms, also to Africa.

Key words: Sweden, Africa, forests, policies, lessons

Context

Early on in the project “Lessons Learnt on Sustainable Forest Management in Africa” (SFM I), the idea emerged to analyse whether there are any relevant lessons to be learnt for African countries from the development of successful sustainable forest management and conservation in Sweden. Obviously, the background to the idea coming up at all was the strong “Swedish involvement” with the SFM I project, through the Royal Swedish Academy of Agriculture and Forestry and through the funding from Sida. Still, at first glance, it would appear that it is a futile exercise to look for relevant lessons for Africa in Sweden—the ecological, economic, social and political conditions are so different. In Sweden, forests cover close to 60% of the land area and are made up of well managed stands of few species (see Figure 1a and b). Three indigenous species, Norway spruce (*Picea abies*), Scots pine (*Pinus silvestris*) and birch (*Betula* spp.), make up 93% of the growing volume. Although rather slow growing, all three are very valuable for both the wood and the pulp and paper industry. This industry is one of the pillars of the Swedish economy and accounts for a

significant part of the foreign exchange earnings and contributes very positively to both the national and local economies.

However, it has not always been like that. In the mid-1800s, the forests in Sweden were in a very poor condition and mainly used for grazing, collection of firewood, collection of edible mushrooms and berries, burning charcoal and pot-ash, and taking wood for construction and fencing purposes. Apart from these uses, there was little commercial value in the forests and, with very few exceptions, no one planted new trees when old ones were felled, a fact that, together with the grazing of domestic animals that prevented natural regeneration, led to a very real deforestation situation in the southern, more densely populated, areas of the country. The vast majority of Swedes were poor, lived in rural areas (90%, today it is only 10%), and agriculture was very low producing and primitive. Slash and burn cultivation was still practiced in many forest landscapes (see photos Figure 2). The starvation catastrophes in the 1860s were still in vivid memory and emigration to America had started on a large scale because of overpopulation (in relation to available farmland and its productivity) in south and central Sweden. In

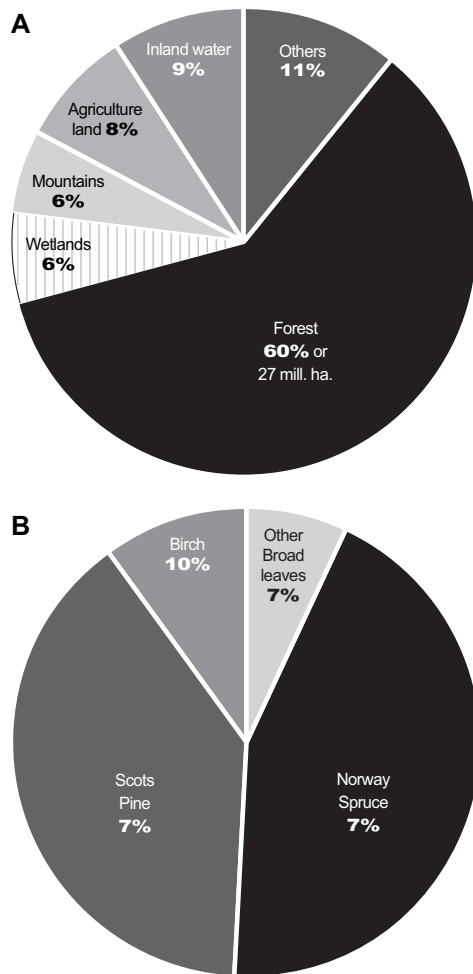


Figure 1. Land use in Sweden today (A) and species distribution in Sweden's forests (B). *From the Swedish Forest Agency.*

other words, there were similarities between Sweden then and Africa today in the way people lived and related to forests.

Naturally, the situations were still not identical—the ecology of Swedish forests was, and still is, very different (more “simple and robust”) from the forest ecologies in Africa, and, unlike in most of Africa, Swedish forests and other land resources were also then privately owned by small as well as large-scale farmers. The Government also owned large tracts of forests, but mainly in the very sparsely populated North of the country. The possible relevant lessons from Sweden are therefore more related to the process itself by which forests in less than 150 years became a primary national asset—the way problems were tackled and solved, opportunities embraced, industries built up, supporting policies and laws were formulated, forest owners were organised, and how education, extension and research support systems were built up, etc. In this article, some of these developments will be highlighted.

Key Issues in Swedish Forestry Development

Bringing Sweden from the very poor rural society it was in the mid/late-1800s to the affluent “post-industrial” society of today (not quite true, of course—industry still plays a very important role) has been a long process involving complex interactions between



Figure 2. Slash and burn agriculture was practised by many farmers in forested regions in Central and Northern Sweden until the late 19th century as shown in these photographs from the time. *The top photo from the Swedish Forest Agency the bottom photo from Mr. Henning Hamilton.*

the dominant societal, economic and political trends of the last 150 years—industrialisation, urbanisation, democratisation and political empowerment of ever increasing sections of society, capitalism, liberalisation, S&T breakthroughs, the two World Wars (and the fact that Sweden stayed out of both), trade, redistribution of incomes, environmentalism, etc. The development of forestry into a major contributor to Swedish welfare has obviously not only been closely intertwined with, and affected by, these processes, but also, in a not insignificant way, contributed to the speed, character and success of some of them. Some key issues help explain the evolution of forestry in Sweden:

Wood acquires a commercial value

Before the mid-1800s, with few exceptions, e.g. wood required for the mining industry in Central Sweden, forests only had value as grazing land, for slash-and-burn agriculture, and as a source of subsistence wood for fuel and food (berries, fruits and mushrooms), building material, tools and fencing. Actually, farmers were not even allowed to cut and sell trees for commercial purposes from their own land without permission from the Crown Forest Officer.

While Sweden was still a predominantly agrarian society, industrialisation and urbanisation processes started in parts of Western Europe, particularly UK, already in the late 18th and early 19th centuries. Sawn timber became an important requirement in these processes—for building, furniture, implements, etc.—and there was hardly anything available in UK. The extensive coal mining industry also required pit props in large quantities. Logs and sawn timber were imported, first from Norway, and from around 1830/40 on a small scale also from Sweden. By the 1860s, export from Sweden had become significant and many sawmills were being established, particularly along the coast in Northern Sweden where remaining mature trees were abundant (see photos Figure 3). Crown Forest land had recently been given to private farmers as a means of stimulating settlement in the remote northern parts of the country. At first, farmers did not appreciate the long-term value of these forests. When sawmilling companies bought timber concessions and, later, the land itself many farmers sold their forest resources. This transfer of forest land and value to companies in Northern Sweden was stopped by Parliament in 1906, both because it led to a destruction of the forest (only large timber trees were felled and no regeneration took place) and because of the socially unacceptable situation of farmers selling off their resources, and thereby future incomes, at a very low price.

It was with the growth of the pulp and paper industry during the last half of the 19th century—the first mill was established in 1857—that also small dimension wood acquired a commercial value and it became interesting to manage forests in a sustainable way for future incomes. The pulp and paper industry grew to become one of Sweden's dominant industrial sectors—from 1900 to 1950 it increased in volume by ten times and it tripled again between 1950 and 2000. Between 80 and 85% of its products are exported. At the same time, Sweden is the second biggest exporter of sawn wood in the world (after Canada) and the 5th biggest producer of sawn wood (after USA, Canada, Russia and Brazil).

Already in 1900, 60% of all Swedish export earnings came from forest products. While it is lower in relative terms today—only 14%—because of the

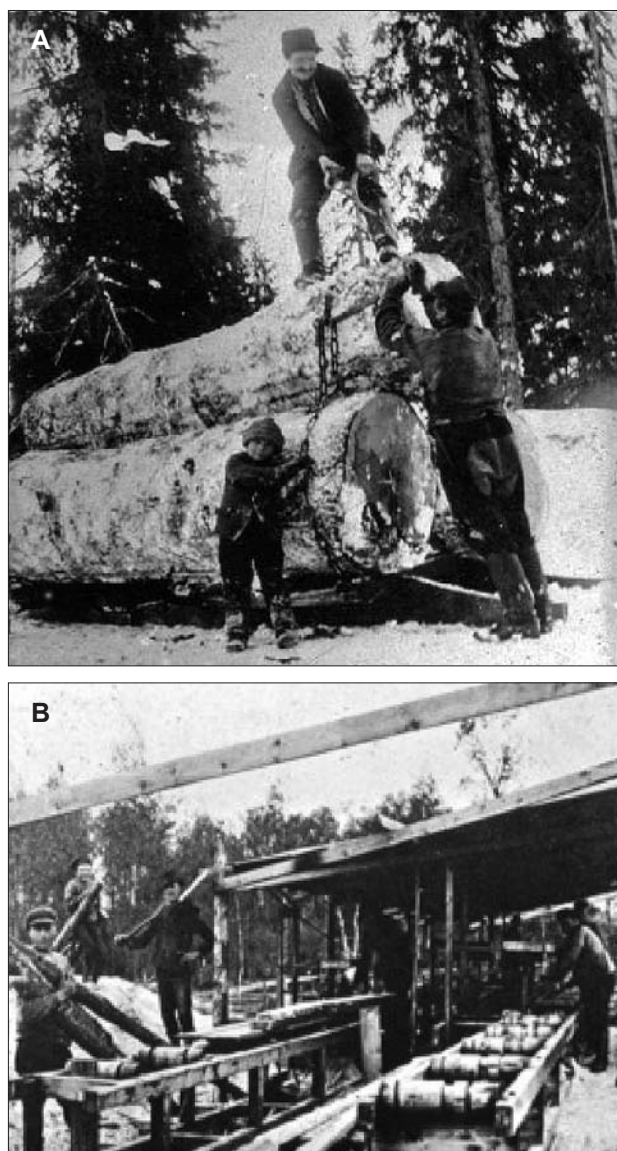


Figure 3. Photos from the early days of timber felling and sawmilling in Northern Sweden. The very large and old trees—the logs on the top photo may be anything up to five hundred years old—were finished within a few decades. Both photos from Mr. Henning Hamilton.

success also of other sectors (cars, medicine, IT), the absolute value is many times higher. In addition, since there is very little import of forest products to Sweden, the forest sector is still by far the main net trade income earning sector. The table below indicates the importance of forestry to Sweden in a global context.

Thus, the fact that forestry and forests industry have become so economically important is without doubt a major reason for the successful introduction of sustainable forest management in Sweden. From a forest owner's and forest producer's perspective, it is, however, also important to realise that the prerequisite for successful SFM in Sweden is the huge value added to the wood by the primary (sawmills, pulp mills) and secondary (paper, furniture, buildings, etc) forest products industry.

Table 1. Sweden and its forests and forest industries in the World (from Mr Ake Barklund)

Population	0.1% (of world total)
Forest land	0.6%
Standing volume of wood	0.8%
Production sawn softwood	6%
Production pulp	6%
Production paper	4%
Export of sawn softwood	11% (No. 2 in the World)
Export of pulp	9% (No. 3 in the World)
Export of paper	10% (No. 4 in the World)

Only a fraction (average 12%) of the final forest product value in the consumer end of the chain refers to the costs of growing the wood itself (silviculture, logging, forest roads, management, surplus to forest owner, etc). The rest, 88%, refers to costs for transport to industry, processing in primary and secondary industry, transport, trade and sales of final products (and surpluses to all actors along this chain).

Ownership of forests

Unlike many other countries, most forests of Sweden have been in private hands for a very long time. Starting in Southern Sweden, the Crown allocated forest land to individual farmers already in the 18th century (although there were significant areas of private forests already before then), and very large areas to farmers to stimulate settlements in the North during the early half of the 19th century. Actually, by 1860/70, more than 60% of the forest area in Sweden was owned by small- and medium-scale farmers, the rest by companies, the Crown and very large farmers (normally from the old nobility). There was then a big transfer of ownership of forest land through purchases of farmers' forests by companies in Northern Sweden between 1860 and 1906. As a result of these purchases, the ownership situation today is quite different in Northern and Southern Sweden—whereas 80% of the forest in the South is owned by private individuals (farmers and people in towns that have inherited forests from their farmer forebears), only one third of the land in the North is farmer owned (and about one third each is owned by forest companies and the State). The current ownership structure of Sweden's total forest area of 27 million ha is shown in Figure 4.

The essential aspect of the predominantly private ownership (private forest owners and companies) of forests in Sweden is that individuals and companies see the long term value in investing in forest improvements and management—in the end, their children (or rather grandchildren), or their shareholders, will benefit from their efforts, and the

value of the forest will increase. In a country where a tree takes 70–100 years to mature, it is also essential that people who own and invest in forestry have trust in the stability of laws, government policies and respect for private ownership. If not, there would certainly be less motivation to engage in sustainable forest management.

Forest policies and legislation

The facts that wood and forests acquired a commercial value in the latter part of the 19th century and that the forests were predominantly privately owned

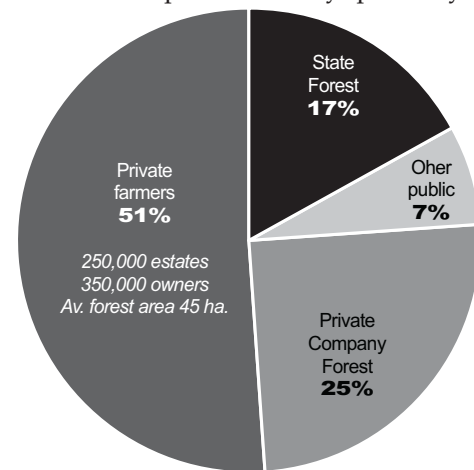


Figure 4. The current ownership structure of Sweden's forests. Note that 76% is privately owned and only 24% is owned by the State and other public institutions (the Church, cities and municipalities, and some County Commons). From the Swedish Forest Agency.

were necessary, but not sufficient, conditions for the successful development of SFM in Sweden. In addition, as forestry and forest industry became important, there was a need for policies, laws and regulations which supported the private owners in their efforts but also ensured that public and national economic and other interests were not jeopardised.

Thus, the increasing value of forests and wood triggered discussions about the need for policy and legislation. With the Swedish tradition of consensus politics and with strong groups of actors, e.g. farmers and industry, all represented in the Parliament, it took a long time before there was agreement on the first Forestry Act (FA). It was kept simple and the main concern was to prevent a further degradation of the forest resources. Subsequent FAs have also been agreed on as a result of drawn out discussions before consensus has been reached between involved parties—these parties have become more (apart from forest owners and industry, later also political parties, labour unions and, more recently, environmental groups) as the years have passed and the major concerns addressed have changed. A very brief summary:

- The first FA of 1903 simply stated that if you cut forests you must ensure that there is new forest coming in its place (by planting or managed natural regeneration). It was in response to the heavy over-harvesting of timber for the sawmills in the latter part of the 19th century.
- The second FA of 1923 stated that “all land without other productive use should be used for forestry”, and that forest owners must care for young forests (the first FA had not lead to improved forests, since selective cutting of timber had continued without care for what was left).
- The third FA of 1948 put value adding in forestry in focus—all forest management activities should be determined by the economies of the activities (e.g. when forest growth slowed down and no longer added value, the stand should be clearfelled).
- The fourth FA of 1979 was passed against the background fear of a major future deficit in wood for industry and it consequently emphasised maximum production through compulsory growth enhancing management, including subsidies for certain measures.
- The fifth FA of 1994 half reversed the policy of the previous FA; environmental groups had become strong and successfully demanded that environmental aspects (e.g. protecting biodiversity) should be as important as the productivity goal.

The Forest Act was partly amended in 2008, and some work on further amendments in 2009, with an emphasis on production enhancing measures (albeit with a continued dual goal of production and conservation), is still being done by the Swedish Forest Agency. Thus, Swedish forest policies have continuously evolved and been revised in response to emerging issues and concerns, often in drawn out processes involving different stakeholders and political and economic interests, and supported

by expertise from government, forest owners, industry and NGOs. Although consensus have normally been reached, there has been very “hot” and acrimonious disagreements along the road, e.g. between farmers and industry in the late 1800s, between socialist politicians (and unions) and forest owners and industry in 1950–1980, and between production forestry (owners, industry and unions) and urban environmentalists in the last 30–35 years. Independent platforms, such as the Royal Swedish Academy of Agriculture and Forestry (KSLA), have played important roles in finding positions around which consensus have eventually been formed.

Finally, and in order to understand the Swedish public’s relation to forests, it is essential to point at the unwritten, customary law of right of public access to all forest land, i.e. also to privately owned forests. The collection of mushrooms, berries, and some ornamental plants (mainly annual flowers, mosses and lichens) is a very popular pass-time among Swedes. You are not, however, allowed to cut living trees or even branches from them. Although the commercial value of picking non-wood resources is difficult to estimate (because the collected items are predominantly used for people’s own consumption), it is significant. In addition, it contributes to people’s health and to their engagement in the forest policy dialogue, often via various NGOs (see next section).

The role of NGOs

Non-Governmental Organisations (NGOs) have played, and continue to play, very important and decisive roles in Swedish forestry. Already in 1883, a Forestry Association was formed in Northern Sweden with a membership of forest owners, industrialists and professional foresters. The Association worked for improved management of the forests in Northern Sweden and took very active part in the discussions leading up to the first Forest Act in 1903. A similar Association for Southern Sweden was formed in 1902, and in 1965 the two merged into the Swedish



Figure 5. The forest policy currently in place stresses that production and environmental concerns (e.g. protection of biodiversity) have equal weight. *Photos from the Swedish Forest Agency.*

Forestry Association. Also the Forestry Society started work in Southern Sweden in 1912, but with the mandate to reforest the vast areas of heather moors that were used for grazing, but were originally forest land. This work was very successful and hundreds of thousand of ha of productive forests today are a testimony to the Society's work. The Society itself is today one of the most important Swedish forest management entrepreneurs.

By far the economically most important NGOs have been the Forest Owners' Associations, which started to be formed among farmers and other private forest owners all over Sweden in the 1920s.



Figure 6. In the 1910s and 20s, the Forestry Society initiated large scale reforestation of land in Southern Sweden that had been destroyed by cutting, burning and animal grazing since the late 17th century. Voluntary work forces, including school classes like in this picture, were used in the planting work. *Picture from Mr. Henning Hamilton.*

The original aims of these associations were to give strength to farmers when negotiating prices for their wood with industry, and also to provide training to their members in forestry techniques. They employed professional foresters and grew into very important organisations. Many of them later evolved into Forest Producers' Cooperatives which started their own industries, mainly sawmills and some other mechanical wood industries. In Southern Sweden, the biggest Cooperative also went into the pulp industry and today runs three of the biggest pulp mills, not only in Sweden, but in the world. Over the years, the Associations and the Cooperatives have merged into four remaining bodies, organising close to 90,000 private forest owners with a total of 6.9 million ha (50% of all privately owned forest land in Sweden) and with substantial forest industries. With their economic and organisational clout, they have played a very strong role in the forest policy and market processes in Sweden.

Because the forest land was predominantly owned by private farmers and the wood-based industry by others there was often much distrust between sellers and buyers of timber and pulp-

wood. There was an obvious need to resolve the problem of how to measure the wood in order to agree on what volumes and qualities were traded. Neutral Wood Measuring Societies, run jointly by sellers and buyers, were set up in the 1930s and led to a much better enabling and trust-based business environment.

Other important NGOs that have played, and play, roles are the Forest Industries Association (a lobby and negotiating body for all the big forest companies), the Royal Swedish Academy of Agriculture and Forestry (KSLA from 1811), and the many environmental NGOs, particularly the Swedish Society for Nature Conservation and WWF-Sweden. In addition, there are NGOs for hunters, orienteers, ornithologists, anglers and others that have an interest in the forests.

The common thing for all these NGOs is that, even if they have different mandates and certainly not always are in agreement on how forests shall be managed in detail, they are strongly committed to sustainable forest management per se, and therefore contribute to the relative consensus that characterise the Swedish society's view on the forest resources.

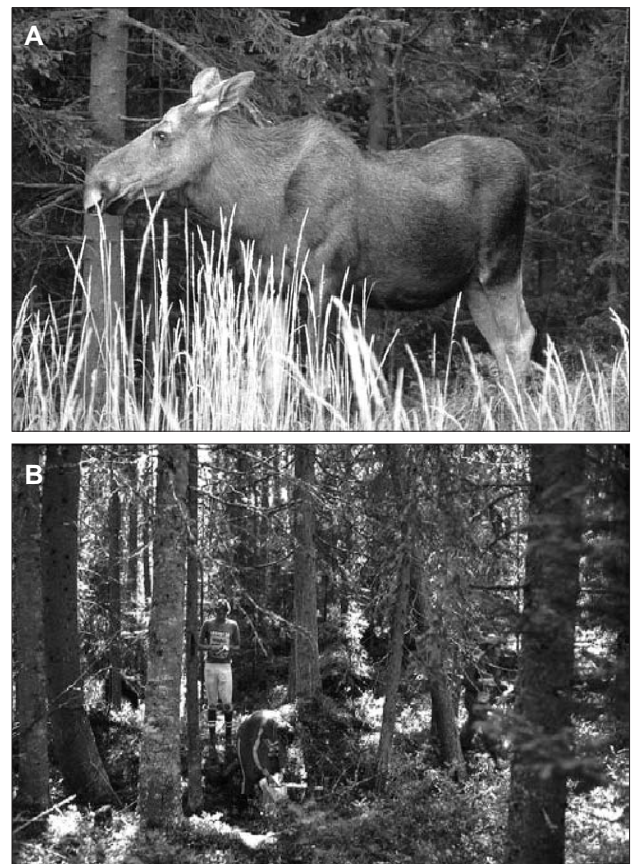


Figure 7. Hunters, anglers, orienteers and others using the forests for other than wood-production are organised in strong NGOs in Sweden, whose voices are listened to by policy-makers. *Photo A from the Swedish Forest Agency, Photo B from Mr. Henning Hamilton.*

The roles of Government

Apart from taking a lead role in developing and continuously revising forest policies and legislation, the Government has been an important actor in creating supporting extension and research systems to the Swedish forestry sector. In connection with the first Forestry Act being introduced in 1903, there were County Forestry Boards being set up in all counties with forest resources in Sweden. These Boards had the dual goal of supervising the local implementation of and adherence to the Forestry Act, and also to serve as extension agencies to private forest owners. A central National Board of Forestry was set up in the 1940s to serve as the main Government Agency for forest extension and policy. In 2006, it was reorganised and changed name to the Swedish Forest Agency.

In 1923, when the second Forestry Act was passed, the National Forest Survey was set up that has since continuously provided statistically reliable information on the quantitative and qualitative conditions of Sweden's forest resources. Today, the Survey is attached to the Forest Faculty of the Swedish University of Agricultural Sciences. This institutional home guarantees that the statistics and information generated is impartial and used in research and higher education. The University itself is, of course, also a very essential Government input into forest research and education. Jointly with the private forest industry and the forest owners associations, the Government also supports the

Swedish Forestry Research Institute, which is the main provider of applied research services to the forestry sector.

Finally, the Government, through the State Forest and Forest Industry Corporation (Sveaskog), manages most of the Crown forests of Sweden—3.4 million ha of productive forest land (15% of the total—there is another 1 million ha of Crown forests under the Ministries of Defence and Communication). Today, Sveaskog operates as a company on market conditions, although it is fully owned by the State.

Lessons Learnt

From the above very sketchy outline of the factors that have shaped forests and forestry in Sweden, several lessons can be learnt. Some are of a more general nature, others relate to the specific issues discussed. Some are mainly of relevance to Sweden, others also to other regions and situations, including Africa.

Economic value of forests and wood

From the time when wood from forests, and thereby forest land, started to acquire an economic value, developments have been driven by market forces in a basically very liberal and investment friendly societal climate. Few subsidies have been given to forestry operations from the public, and the sector has paid its own costs. It is therefore now a uniquely competitive and reasonably profitable pursuit where



Figure 8. Forest extension to individual and groups of forest owners is organised both by the Government and by the Forest Owners' Associations. There are also several consulting agencies and other organisations providing advice and management services to forest owners. *Left photo Mr. Henning Hamilton, right the author.*



Figure 9. From the very labour intensive forest work of the late 1800s and first half of the 1900s until today's highly automated work in forests and industry, the economic role of forestry for the rural areas has resulted in a strong public acceptance of economic forestry in Sweden.

both private forest owners and forest industry have been prepared to invest huge amounts of capital over the years.

Because much of the money generated in the forestry sector went back to people in rural areas, either as profits by farmers and other forest owners or as salaried employment in forest operations and industry, commercial forestry has enjoyed strong support among the Swedish public. Forestry significantly contributed to taking rural areas out of poverty in Sweden in the period 1870-1950, and until today, forestry and associated industry and services are still main providers of jobs and income in most rural areas. It is only in the last 30-40 years that urban environmental groups have questioned some of the management practices that the economic approaches to forest management have resulted in.

Ownership of forest

The predominantly private ownership of forests has eventually resulted in a very efficient and dedicated management of the forest resources. Forest owners and companies have seen the benefits of investing in



Figure 10. In spite of the predominantly private ownership of forest land in Sweden, there is also a very strong, although unwritten, customary "law" of the right of public access to all forest land. This is another contributing reason to the Swedish people's engagement in forestry and forest issues. *Photo from the Swedish Forest Agency.*

their resources. This willingness to invest in the very long-term undertaking that forestry is has been made possible by secure land tenure, respect for private ownership, reasonable and supportive legislation, predictable economic "rules of the game", open and non-corrupt governance, and efficient and trusted mechanisms for resolving conflicts.

Policies and legislation

Forest policies and legislation in Sweden have evolved and been continuously revised in response to major problems and opportunities as they have emerged. Their developments have been influenced by all major stakeholder groups through various political and informal processes that have aimed for, and often achieved, reaching a consensus. In other words, a "correct" policy or law is one around which consensus has been reached and which is respected by all stakeholders.

A good forest policy and law should be kept as simple as possible and concentrate on the key issues only, rather than try to address all details concerning forest activities. It must keep a good balance between positively supporting the forest owners, users and industry on the one hand, and maintain the interests of society at large on the other. Neither "top-down" approaches nor influences from outside interests have worked in Swedish forest policy formulation.

Although there are cases, particularly in recent years, where short-term considerations, have been allowed to influence them, Swedish forest policies have normally taken a long-term perspective and been under-pinned by very thorough facts and statistics about the conditions and trends in the forest resources and the economies of forest operations and industry.

The roles of NGOs

The multitude of organisations directly associated with, or with an interest in, the forest and forestry sector of Sweden, have played, and continue to play, many and very important roles. They represent different stakeholder groups and often take on lead roles in the consensus-building processes when policies and legislation are developed, they lobby and are advocates for their interests both to the public opinion and to politicians, they provide training, advice and other forms of support to their members, they establish and maintain international relations with sister organisations around the world, they provide facts and figures on their mandate areas of concern, etc. They have also significantly contributed to the high ethic standards and professionalism that characterise the forest sector in Sweden today.

The roles of Government

The main lesson learnt about the many roles of the Government—facilitator of policy discussions, enacting laws and ensuring their enforcement, and provider of extension, research and training—is that the more objective and professional the Government act as a supporter of the forest sector, the more will the sector thrive. Top-down approaches with biased perspectives in favour of only one or a few stakeholders (be it industry, labour unions, forest owners, farmers or environmentalists) will rarely lead to a consensus that is accepted by all.

General lessons learnt

Contrary to the often repeated perception internationally that commercial forestry inevitably leads to deforestation and forest destruction, the lesson learnt in Sweden is that economic and profit-enhancing approaches have been the pre-requisites for not only saving the forests, but for substantially increasing their area, volume, growth and value. Whereas “modern” forestry have undeniably led to a situation where most managed individual stands of forests are more uniform in age and composition than a “natural” forest would be, the national impact on biodiversity is relatively modest. The facts that the few naturally occurring tree species dominating forests in Sweden are also the same ones that are commercially interesting and that the forests are owned by hundreds of thousand of small-, medium- and large-scale owners with very different management goals and intensities guarantee a large ecological diversity at national and regional scales.

The development of sustainable forest management in Sweden has taken a long time and it still keeps on evolving. Policies have changed and mistakes have been committed and corrected

over the years. Outside societal processes as well as “internal” forestry developments (e.g. technology changes and economic situations) have influenced the way forests are managed. The lesson is that it would have been impossible to go from a situation of deforestation and forest destruction to “perfect” sustainable forest management based on hundreds of criteria and indicators (C&I) overnight. Still, that is what is expected of countries in Africa.

The high degree of collaboration between the major actors—forest owners, industry and Government—around research, education, technological developments and transport infrastructure (Sweden has a very dense and well integrated forest road network, for example) has contributed to creating a strong sense of common purpose within the forest sector, which still does not mean that there are no disagreements between actors and stakeholders on specific issues.

Finally, although the development of forestry in Sweden has mainly been based on consensus and eventually has led to a situation where forests both provide substantial contributions to individual and national wealth and environmental stability, it is also obvious that important changes can rarely be done without negative effects for some—there are rarely clear 100% win-win solutions. It is, therefore, essential to build decisions on forest policies and operations (both at national and enterprise levels) on a long-term perspective, on reliable facts and figures based in science and solid experience, and on a genuinely participatory process involving all relevant stakeholders.

How can Africa Benefit From Swedish Experience

How can Africa benefit from lessons learnt in Sweden? Obviously, all lessons learnt concerning the development of SFM in Sweden are not relevant for countries or regions in Africa. At the detailed scale of managing the forest and tree resources, the ecological and socio-economic conditions are quite different and hardly amenable for any direct transfers of technology lessons, with the possible exception of management by Governments and private forest companies of plantations of one or a few species. Similarly, while the lessons learnt in Sweden on the importance of societal “macro-conditions”—such as democracy, long-term legal and economic stability, a liberal and investment friendly business environment, freedom from corruption, etc—would certainly also be positive and necessary conditions for eventually achieving SFM on a large scale in Africa, such conditions will not evolve within the forestry sector itself but in society at large.

Instead, the way forward for transferring relevant lessons from Sweden to Africa could

possibly focus on building institutions and capacity within such areas as:

- How to run an efficient, participatory and consensus-driven process of developing forest policies and legislation. What institutions and stakeholders are involved, how are problems and opportunities identified, how are priorities set, how is the process supported with facts and figures, how are results implemented and enforced, how to handle multiple-goal situations (e.g. profit-making and environmental protection), how are monitoring and evaluation systems put in place, etc.
- How are cost-effective and relevant supporting mechanisms set up for the forest sectors at national and regional levels, and how are resources spent on these related to the perceived economic, environmental and societal benefits of the forest and tree sector? Such supporting mechanisms may include research, extension to tree growers, education, training, inventories of forest and tree resources, market information and analysis, phytosanitary services, etc.
- How to organise stakeholder groups in ways that will permit effective participation in policy processes and safeguard the interest of members. This may include Forest Owners' (or, more commonly in Africa, Tree Growers') Associations, Forest Producers' Cooperatives, Community Forest Associations, Forest and Wood Industry Associations, and Associations for promoting forestry, tree planting and good management in general, etc.

The Swedish forestry sector, including government and non-government bodies, have been successful in those areas and there are many lessons that can be transferred to Africa, obviously requiring adaptations and adjustments to the special conditions of a particular country, region or issue. The way forward, to identify opportunities for collaboration leading to such transfer of lessons learnt, may include traditional development cooperation through various projects, study tours to Sweden by Africans responsible for forestry and vice versa, exchange of staff by research, extension and educational institutions (in both directions), twinning arrangements between institutions in Africa and Sweden, encouraging links between "sister organisations" (e.g. forest/tree owners associations or wood industry associations), joint commercial ventures, etc.

To a very modest degree, such links have existed in the past (less today, though) but in a very ad hoc way and normally based on bilateral aid cooperation

between Sweden and individual African countries. It is proposed that, in order to more systematically explore opportunities for transferring relevant lessons from Sweden to Africa, a better defined link mechanism is established for this task. A logical and technically justifiable such mechanism would be to continue the cooperation that has started in the project on "Lessons learnt on SFM in Africa" between the Royal Swedish Academy of Agriculture and Forestry (KSLA) and the currently evolving "African Forest Forum" (AFF). Both these bodies are independent, not-for-profit associations with individual memberships that represent the most important forest stakeholders in Sweden and Africa respectively.

Acknowledgements and Suggested Further Reading

The author has used material from two studies that were commissioned to Swedish forestry experts in connection with the SFM project, viz. *"Lessons learnt from the evolution of forest policy in Sweden in the last 150 years"*, by **Mr. Henning Hamilton**, and *"Producers' cooperatives—a tool for developing small-scale forestry"* by **Mr. Sven Sjunnesson**. Both these complete reports are accessible at the website of KSLA (www.ksla.se). In addition, a number of valuable workshop presentations and unpublished notes on the subject by **Prof. Reidar Persson** of SLU and **Mr. Ake Barklund** of KSLA have also been used in compiling this brief. Finally, some diagrams and photos have been taken from a presentation by **Mr. Hakan Wirtén** from the Swedish Forest Agency. I am indebted to all these colleagues.

Apart from the two specially produced reports by Hamilton and Sjunnesson, mentioned above, virtually all overview reports on development of forestry in, and forest history of, Sweden are written in Swedish and difficult to access by non-Swedish speakers. This applies both to scientific and more popular books and documents. One short popular summary brochure (15 pages) called *"The Swedish Forestry Model"* was produced jointly by KSLA and the Swedish Forest Agency some years ago (2001). It is available from both organisations. The Swedish Forest Agency has a very good internet homepage with comprehensive information also in English: www.skogsstyrelsen.se. Likewise, the Swedish Forest and Wood Portal on Internet (www.skogssverige.se) has links to the homepages of all Swedish forest organisations, institutions and companies, the vast majority of which have English versions of their information.